

WHAT IS CLAIMED IS:

- Subj A*
1. An ink for ink jet printers which contains a pigment and an organic solvent where a silicone graft polymer is contained in the ink and is dispersed in the organic solvent in the form of particles having a particle diameter of 0.01-0.3  $\mu\text{m}$  in such a state as the silicone graft polymer being adsorbed to at least a part of the outer surface of the pigment.
  2. An ink for ink jet printers according to claim 1, wherein the pigment is selected from the group consisting of inorganic pigments, organic pigments and dyes insoluble in the solvent and the pigment has a particle diameter of 0.01-0.3  $\mu\text{m}$ .
  3. An ink for ink jet printers according to claim 1, wherein the silicone graft polymer is adsorbed to the pigment in an amount of 5-3000 parts by weight based on 100 parts by weight of the pigment.
  4. An ink for ink jet printers according to claim 1 or 2, wherein the pigment is an organic pigment and/or carbon black, and the silicone graft polymer is dispersed in the organic solvent in the form of particles having a particle diameter of 0.01-0.3  $\mu\text{m}$  in such a state as the silicone graft polymer being adsorbed to at least a part of the outer surface of the organic pigment and/or carbon black.
  5. An ink for ink jet printers according to claim 1, wherein the organic solvent is small in polarity and has an electrical resistivity of not lower

than  $10^9 \Omega \cdot \text{cm}$ , and the organic solvent is contained in an amount of 50-10000 parts by weight based on 100 parts by weight of the pigment.

6. An ink for ink jet printers according to claim 1 or 5, wherein the organic solvent is a silicone-based organic solvent.

7. An ink for ink jet printers according to claim 6, wherein the silicone-based organic solvent comprises a methylpolysiloxane and/or cyclic methyl-polysiloxane structure.

8. An ink for ink jet printers according to claim 1, wherein the silicone graft polymer has a polar group.

9. An ink for ink jet printers according to claim 8, wherein the polar group is selected from at least carboxyl group, hydroxyl group and amino group.

10. An ink for ink jet printers according to claim 1, wherein the silicone graft polymer has an acid value of 5-100 KOH mg/g.

11. An ink for ink jet printers according to claim 1, wherein the silicone graft polymer has a hydroxyl value of 5-100 KOH mg/g.

12. An ink for ink jet printers according to claim 1, wherein the silicone graft polymer has an amine value of 5-100 KOH mg/g.

13. An ink for ink jet printers according to claim 1, wherein the silicone graft polymer has a number-average molecular weight of 2000-50000.

*Subj A2*  
14. An ink for ink jet printers according to claim 1, wherein the silicone graft polymer is an acrylic high molecular compound.

15. An ink for ink jet printers according to claim 1, wherein the graft portion of the silicone graft polymer has a molecular weight of 500-10000.

16. An ink for ink jet printers according to claim 1, wherein the silicone graft polymer is crosslinked and, further, adsorbed to the pigment.

*Subj A3*  
17. An ink for ink jet printers according to claim 16, wherein the crosslinkage is an ester linkage.

18. An ink for ink jet printers according to claim 1, wherein the silicone graft polymer has two or more functional groups for crosslinking which can crosslinking-react with an acidic group.

19. An ink for ink jet printers according to claim 18, wherein the functional group for crosslinking is a glycidyl group or a hydroxyl group.

20. An ink for ink jet printers according to claim 1 which is used for an ink jet printer provided with a recording head having a plurality of ink discharging ports, an energy transforming means for transforming electric energy to ink discharging energy in correspondence to the plurality of discharging ports.

21. An ink for ink jet printers according to claim 1 which contains at least one additional additives selected from the group consisting of  
*J*

binders, organic solvents, anionic, cationic and nonionic surface active agents, preservatives, deodorants, anti-skimming agents, perfumes, pigment dispersing agents, pigment derivatives, leveling agents, electric charge adjusting agents and wetting agents.

22. An ink for ink jet printers according to claim 1 which has a viscosity of 1-20 mP·s.